

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

PALTALK HOLDINGS, INC.,

Plaintiff,

v.

CISCO SYSTEMS, INC.,

Defendant.

CIVIL ACTION NO. 6:21-CV-00757-ADA

JURY TRIAL DEMANDED

**PLAINTIFF PALTALK HOLDINGS, INC.'S  
RESPONSIVE CLAIM CONSTRUCTION BRIEF**

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## INTRODUCTION

Paltalk asserts infringement by Cisco of U.S. Patent No. 6,683,858 (the “Patent”), which discloses inventions critical to modern audioconferencing and videoconferencing applications. Before the Patent, conferencing applications could not effectively facilitate conferences that included both computers and standard telephones. These applications degraded the user experience because, among other things, they inadequately managed bandwidth and did not identify active speakers. The Patent overcomes these shortcomings by disclosing an invention that allows personal computerized devices and telephones to participate in a single, seamless conference.

The Patent’s claims use plain language to clearly disclose the claimed invention. Three items remain in dispute.

- First, Cisco seeks to import limitations not supported by the Patent itself to construe the term “multiplexed stream.”
- Second, Paltalk proposes a construction of the term “PC-based equipment” that tracks the Patent’s language. Paltalk’s construction will clarify for the jury that the term encompasses all personal computerized devices.
- Third, the four asserted means-plus-function claims require construction. The parties have agreed on constructions for two of them; two others (which both involve “means for removing” an active speaker’s own audio) are disputed and addressed in the claim construction briefing. Paltalk has demonstrated that both have a proper antecedent basis and are not indefinite.

“*Multiplexed Stream.*” Cisco and its expert both acknowledge that the term “multiplexed stream” is well-known in the art. Still, Cisco proposes a “clarifying” construction that, if adopted, would cause confusion. Cisco’s awkward construction imports a host of limitations from the preferred embodiment and its expert’s declaration into the Patent claims. The Court should reject Cisco’s proposal. *See Hill-Rom Servs. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014) (“[W]e do not read limitations from the embodiments in the specification into the claims.”). It is

undisputed that “multiplex stream” is well-understood, and the Patent does not suggest that the inventors tried to ascribe idiosyncratic meaning to the term.

*“PC-based equipment.”* The Patent’s specification uses the term “PC-based equipment” to describe any personal computerized device that can participate in conferencing sessions. The Patent refers to “personal computers” and does not limit this term to any particular type of computerized device or operating system. Cisco opposes Paltalk’s construction and appears to try to exclude smartphones or VoIP phones, in contrast to the Patent’s plain language, which excludes only “traditional phone equipment” from the scope of the claim term. *See, e.g.*, ’858 Pat., 1:59. Cisco’s position underscores the need for Paltalk’s construction.

*Means-plus-function terms.* Paltalk identifies functions and structures for the two disputed means-plus-function terms, while Cisco argues that the terms are indefinite under 35 U.S.C. § 112 for lack of structure. Both terms involve “means for removing” active-speaker audio before the audio is sent back to active-speaker clients (i.e., echo suppression). The Patent clearly discloses “mixer 118” as the structure for both terms because “mixer 118” performs the audio-removing function. The specification also discloses a step-by-step algorithm that achieves the claimed functions. The claims are not indefinite.

## LEGAL STANDARDS

Terms should be given their “ordinary and accustomed meaning as understood by one of ordinary skill in the art.” *Bell Atl. Network Servs. Inc. v. Covad Commc’ns Grp. Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). “Accordingly, a technical term used in a patent is interpreted as having the meaning a person of ordinary skill in the field of the invention would understand it to mean.” *Id.* When construing ambiguous claim language, courts should “look first to the intrinsic evidence of record, i.e. the patent itself, including the claims, the specification, and if in evidence, the prosecution history.” *Vitronics Corp. v. Conceptronic*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

The Federal Circuit has repeatedly held “that courts cannot alter what the patentee has chosen to claim as his invention, that limitations appearing in the specification will not be read into claims, and that interpreting what is meant by a word in a claim is not to be confused with adding an extraneous limitation appearing in the specification, which is improper.” *Intervet Am., Inc. v. Kee-Vet Labs., Inc.*, 887 F.2d 1050, 1053 (Fed. Cir. 1989) (quotation marks omitted).

Courts may also turn to extrinsic evidence including dictionaries, treatises, and expert testimony. *Id.* at 1583. “Dictionaries and technical treatises ... hold a ‘special place’ and may sometimes be considered along with intrinsic evidence when determining the ordinary meaning of claim terms.” *Bell Atl.*, 262 F.3d at 1267. Expert testimony “may be used only to help the court come to the proper understanding of the claims [and] may not be used to vary or contradict the claim language.” *Vitronics*, 90 F.3d at 1584.

### TERMS FOR CONSTRUCTION

#### 1. “a multiplexed stream” / “said multiplexed stream” (cls. 1, 2, 6, 7)

| Claim Language       | Paltalk’s Construction     | Cisco’s Construction  |
|----------------------|----------------------------|---|
| “multiplexed stream” | Plain and ordinary meaning | “A data structure containing a continuous sequence of interleaved packets of audio data from each client on the active speakers list” |

“Multiplexed stream” does not require construction because its meaning is understood by persons of ordinary skill in the art (POSITAs). *See Bell Atl.*, 262 F.3d at 1267. If a term is well understood by a POSITA and the patentee did not “set forth a special definition,” plain and ordinary meaning applies. *Trilogy Software, Inc. v. Selectica, Inc.*, 405 F. Supp. 2d 731, 734 (E.D. Tex. 2005). It is well settled that while a “patentee is free to be his own lexicographer, ... any special definition given to a word ***must be clearly set forth in the specification.***” *Id.* (emphasis added) (citing *Intellicall, Inc. v. Phonometrics*, 952 F.2d 1384, 1388 (Fed. Cir. 1992)).

Here, there is no suggestion in the Patent that the inventors acted as their own lexicographers with respect to “multiplexed stream.” It is beyond dispute that Cisco’s proposed construction is not “clearly set forth in the specification”; it doesn’t appear in the specification at all. *See id.* Indeed, the Patent itself includes no “special definition” or limiting language.<sup>1</sup> *See id.* The term is not set off by quotation marks; nor does the defining signal “is” preface the term anywhere in the patent. *See Sinorgchem Co., Shandong v. Int’l Trade Comm’n*, 511 F.3d 1132, 1136 (Fed. Cir. 2007) (citing *Cultor Corp. v. A.E. Staley Mfg.*, 224 F.3d 1328, 1331 (Fed. Cir. 2000) and *Abbott Labs. v. Andrx Pharms.*, 473 F.3d 1196, 1210 (Fed. Cir. 2007)) (describing indicators that patentee intended to act as lexicographer by using definitional signals).

Cisco does not and cannot even suggest that its lengthy proposed construction (or any part of it) appears anywhere in the Patent. To the contrary, Cisco concedes that “a skilled person in the art can ascertain the meaning of ‘a multiplexed stream’ / ‘said multiplexed stream’ in the context of the intrinsic record.” Cisco Br. at 9. Cisco’s expert confirms that “[m]ultiplexing in the communications context is a well-understood technique.” Cisco Br. at 6; Bress Decl. ¶ 41.<sup>2</sup> And Cisco’s expert refers to a “multiplexed stream” as “simply ... the output of a multiplexer.” Bress Decl. ¶ 41. Cisco’s concession that “multiplex” and “stream” are easily understood should end the inquiry. No construction is necessary.

Dr. Madisetti, a Professor of Electrical Engineering at the Georgia Institute of Technology, confirms that POSITAs understand “multiplexed stream” using the intrinsic evidence of the Patent.

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<sup>1</sup> Both parties rely on the same definition of “multiplexing” from the 1997 and 1999 Microsoft Press Computer Dictionaries: “multiplexing” is “a technique used in communications and input/output operations for transmitting a number of separate signals simultaneously over a single channel or line.” Ex. 2, *Multiplexing*, Microsoft Press Computer Dictionary (3d. ed. 1997). This definition tracks the Patent’s use of “multiplexed stream,” *see* ’858 Pat., 8:2-7.

<sup>2</sup> Mr. Bress’s declaration was attached to Cisco’s Opening Claim Construction Brief and is available at ECF No. 25-1.



Madisetti Decl. ¶¶ 38-39. Dr. Madisetti agrees with Mr. Bress that “multiplexing is a well-understood technique.” *Id.* at ¶ 38. Dr. Madisetti also explains that “stream” is also well-known and commonly refers to “a flow of information.” *Id.* at ¶ 40 (citing *Output Stream*, Microsoft Press Computer Dictionary at 383 (5th ed. 2002)). Given the well-known meanings of “multiplex” and “stream,” Dr. Madisetti concludes that “multiplexed stream” needs no construction. *Id.* at ¶ 43. This analysis is consistent with the position of other courts which have declined to construe both terms in favor of their plain and ordinary meanings. *See, e.g., Cisco Sys., Inc. v. Innovative Wireless Sols., LLC*, 2015 WL 128138, at \*13 (W.D. Tex. Jan. 8, 2015), *aff’d sub nom. Ruckus Wireless, Inc. v. Innovative Wireless Sols., LLC*, 824 F.3d 999 (Fed. Cir. 2016) (giving “multiplexing” a plain and ordinary meaning where “[n]othing in the claim language or specification demonstrates that the patentee intended anything other than the plain and ordinary meaning of the term.”); *EMC Corp. v. Pure Storage, Inc.*, 2016 WL 402580, at \*5 (D. Del. Feb. 2, 2016) (giving “data stream” a plain and ordinary meaning).

Despite the widespread agreement that “multiplexed stream” is well understood by a POSITA, Cisco nevertheless proposes a construction—purportedly “to clarify [the] plain and ordinary meaning for the jury.” Cisco Br. at 9. But Cisco’s 19-word construction would only introduce confusion where none exists. Cisco’s “clarified” construction tries to import at least five limitations from the preferred embodiment and its expert’s declaration: “data structure,” “continuous sequence,” “interleaved packets,” “audio data,” and “each client on the active speakers list.” Those limitations are largely found nowhere in the Patent:

- the Patent *never* recites Cisco’s proposed construction;
- the Patent *never* uses the term “data structure”;
- the Patent *never* references the concept of a “continuous sequence” (it doesn’t use the term at all);

- the Patent *never* references the concepts of “interleaving” or “interleaved packets” (it doesn’t use the words “interleaved” or “interleaving” at all); and
- the Patent *never* suggests that the concept of a “multiplexed stream” must contain only “audio data.”

Cisco thus has no support in the intrinsic record for its proposed constructions. Nor do Cisco’s arguments—which are largely based on its expert’s bare assertions—offer any basis to depart from plain and ordinary meaning.

First, Cisco tries to limit “multiplexed stream” by arguing that the ’858 Patent only discloses multiplexed streams that are formed from “data structures.” Cisco Br. at 6. There is no support for this limitation in the claim language, specification, or file history. The Patent does not limit the invention to “data structures” but instead simply describes data being transmitted. ’858 Pat., 6:34 (referring to “audio data” and not a data structure); *see* Madisetti Decl. ¶ 41. Even Cisco’s dictionary definition of “stream” refers to a “data transmission”—not to a particular data structure. *See Stream*, Microsoft Press Computer Dictionary (4th ed. 1999). Cisco tries to use its expert’s opinion to import a “data structure” limitation, but expert testimony may not be used to contradict the intrinsic evidence and limit claim language. *See Vitronics Corp.*, 90 F.3d at 1584.

Cisco also overreads claim 1’s use of the phrase “said multiplexed stream.” Cisco says that the phrase implies a requirement that each client receive the same “single output data sequence.” *See* Cisco Br. at 6. The Patent’s language contradicts Cisco’s argument. The Patent details the multi-step process by which active speaker data is removed from each individual active speaker’s multiplexed stream. *See* ’858 Pat., 5:44-50 (“In step 314, active speaker audio data for every active speaker is multiplexed. However, as will be apparent to those skilled in the relevant art(s), if party j is an active speaker, step 314 will not include party j’s own audio data in the multiplexed packets.”). Where there are two active speakers j1 and j2 in a conference, they will each receive a unique multiplexed stream because the invention will remove j1’s audio data from the stream sent

to j1 and j2's audio data from the stream sent to j2. Likewise, even where a conference only has 1 active speaker, the active speaker's stream will not include his own audio data and would thus differ from the streams received by other conference participants.

The Court should likewise reject Cisco's argument that the "data structure" limitation is "compelled by the patent's sole embodiment." *See* Cisco Br. at 7. There is not a sole embodiment and, in any event, limitations from embodiments cannot be read into the claim language. *See Hill-Rom Servs.*, 755 F.3d at 1371. Moreover, the preferred embodiment was not intended to limit the claim language, as the Patent clearly states. *See* '858 Pat., 7:40-53 ("While various embodiments of the present invention have been described above, it should be understood that they have been presented by way of example, and not limitation.... Thus the present invention should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the following claims and their equivalents."); *see also id.* 6:25-29 (the "[v]arious software embodiments" described will allow "a person skilled in the art ... to implement the invention using other computer systems or computer architectures"). Finally, the preferred embodiment does not compel the "data structure" limitation. The specification refers to audio data that is multiplexed by "mixer/multiplexor 208" and turned into multiplexed audio packets. *Id.* 5:46-47. But nothing in the embodiment requires the multiplexor to output data structures, only the multiplexed packets. The Patent does not use "packet" to refer to any one data form, and "packet" simply refers to the several flows of data that have been multiplexed. *Id.* 4:50-52. Data may not be stored in a structure at all. *See* Madisetti Decl. ¶ 41. There is no basis for Cisco's "data structure" limitation, and it should be rejected.

Second, Cisco argues that a "multiplexed stream" requires data to be sent in a "continuous sequence." Cisco Br. at 6. But again, Cisco's construction is not supported by *any* intrinsic

evidence. The Patent depicts and describes “streams” as simple outputs of multiplexing, and Cisco’s expert acknowledges as much. Mr. Bress recognizes that “[w]hen combined with the term ‘multiplex,’ the term refers simply to the output of a multiplexer ....” Bress Decl. ¶ 41. After the server receives packets from multiple clients, the server prepares the data to be sent back to the mixing clients. *See* ’858 Pat., Fig. 3. Nothing in the intrinsic evidence requires that the server’s transmission be “continuous.” The flow of data back to the client can be interrupted by other packets or even paused. *See id.*, 4:63-66. (“In step 302, an event is detected by the mixer 118 causing the switch 204 to close. As mentioned above, such an event can be timer driven, where an event is generated on a pre-determined time schedule.”). In fact, the Patent expressly contemplates that data transmission may be halted by the occurrence of an event and thus does not require continuous transmission. *See id.* 4:63-5:3; Madisetti Decl. ¶ 48.

Third, Cisco tries to re-define “multiplexing” to require that data be “interleaved.” Cisco Br. at 7 (“The claim recites ‘multiplexing,’ which a person of skill in the art would understand to mean interleaving data from multiple sources into a single output data sequence.”). This is completely without support. The Patent says that “packets of audio data” are “***multiplexed***” into a “multiplexed stream.” ’858 Pat., 8:1-3 (emphasis added). The word “interleaving” *does not appear anywhere in the patent*. So, while interleaving could be *one* way to multiplex audio packets, the Patent does not restrict the concept of multiplexing to interleaving. Madisetti Decl. ¶ 38. There is no need to construe multiplexing as “interleaving” when, as Cisco admits, multiplexing is well-known in the art. *See* Cisco Br. at 6 (“Multiplexing ... is a well-known concept in communications ....”). Doing so would introduce confusion and require the jury to consider an additional technical term.

With *no* intrinsic support for its “interleaving” limitation, Cisco relies on the say-so of its expert. But even Mr. Bress’s declaration is nebulous on the point. In one part of his declaration, Mr. Bress equates multiplexing to interleaving, but he contradicts that conclusion elsewhere by saying that multiplexing is well-understood and that “multiplexed stream” “refers simply to the output of a multiplexer.” *Compare* Bress Decl. ¶ 41 (“[Multiplexed stream] refers to ... a continuous, interleaved, sequence of data from its multiple input sources ....”), *with id.* (“When combined with the term ‘multiplex,’ [stream] refers simply to the output of a multiplexer .... ‘Multiplexing’ in the communications context is a well-understood technique.”). Dr. Bress provides no support from any treatise or dictionary for the notion that a “multiplexed stream” must be “interleaved.” *See* Bress Decl. ¶ 41. The Court should reject Mr. Bress’s testimony, which contradicts the claim language.

Fourth, Cisco tries to limit the term “multiplexed stream” to a stream that contains *only* “audio data.” But Cisco does not say where in the Patent that limitation appears. Instead, the Patent explains that “multiplexed streams” can include information other than audio data. *See, e.g.*, ’858 Pat., 5:36-40 (“Further, the determination of each client’s mixing capability can be facilitated, in one embodiment, by the service provider inserting proprietary code into the audio stream or control stream received from its subscribers.”). “Multiplexed streams” thus include control data and other types of data. Madisetti Decl. ¶ 42.

Fifth, Cisco tries to import a requirement that a “multiplexed stream” contain data from “each client on the active speakers list.” Doing so would directly contradict the claim language. The claims separately and independently address the concept that conferencing software “multiplex[es] ... data received from each client on [the] active speakers list.” *See, e.g.*, ’858 Pat.,

cl. 1. Importing an “each client” limitation to the construction of “multiplexed stream” would create a confusing redundancy. There is no basis to adopt Cisco’s proposed construction.

**2. “PC-based equipment” (cls. 4, 9)**

| Claim Language       | Paltalk’s Construction           | Cisco’s Construction        |
|----------------------|----------------------------------|-----------------------------|
| “PC-based equipment” | “devices for personal computing” | Plain and ordinary meaning. |

The Patent discloses an invention that enables conferencing software to include participants that use standard telephones and those that use personal computerized devices in the same conference. The Patent distinguishes between two types of client devices: (1) telephones that dial into conferences and receive data that has been mixed by the server; and (2) computerized devices that receive multiplexed data and then mix the data locally. *See, e.g.*, ’858 Pat., 1:58-59.

In claims 4 and 9, the Patent uses the term “PC-based equipment” to describe any computerized “device for personal computing.” The Patent does not limit “PC-based equipment” to any particular type of personalized computer device. Instead, the patent refers to “personal computers” that can connect to a conference using “the internet, rather than traditional phone equipment over the PSTN.” ’858 Pat., 1:44-45, 1:58-59. Cisco mostly agrees with this definition of “PC-based equipment.” *See* Cisco Br. at 9.

Both parties also agree that the Patent distinguishes between personal computers and traditional phones. *See* Cisco Br. at 9. Traditional phones, like those that connect via the PSTN, are not “PC-based equipment.”<sup>3</sup> ’858 Pat., 1:58–59; Madisetti Decl. ¶ 44. Personal computers

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<sup>3</sup> PC-based equipment is the equipment used by any computer-based client in a conference. *See* ’858 Pat., 1:55-59. PC-based clients, such as smartphones and VoIP devices, have the capability to mix. *Id.* 2:20; Ex. 3 at 72 (“Then, the clients are divided into two categories—those [that] have the capability to mix multiple audio streams and those [that] do not.”). Mixing is a process that can be performed by computerized devices like smartphones and VoIP phones (and laptop and desktop computers) but cannot be performed by PSTN devices. Madisetti Decl. ¶ 45. Smartphones

capable of connecting to a conference call via the internet, as one example, are “PC-based equipment.” *Id.*

The parties’ disagreement is minor. Paltalk seeks to clarify the term for the jury and proposes a construction that tracks the Patent’s language: “PC-based equipment” means “devices for personal computing.” The Patent refers to “low-cost personal computers” that can be used to connect to audio conferences. ’858 Pat., 1:20-29. Cisco, by contrast, proposes plain-and-ordinary meaning but suggests that it may try to exclude all “phones” (presumably including smartphones). *See* Cisco Br. at 9. This view should be rejected because there is no basis for a narrow interpretation of “PC-based equipment.” Courts have construed “computer” broadly, recognizing that “[t]he term ‘computer’ is not associated with any fixed or rigid meaning, as confirmed by the fact that [the term] is subject to numerous definitions and is used to describe *a variety of devices* with varying degrees of sophistication and complexity.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (emphasis added). POSITAs understand the term to refer to “at the most fundamental level, a device [that] is capable of carrying out calculations.” *Id.* (citing *Nat’l Advanced Sys., Inc. v. United States*, 26 F.3d 1107, 1111-12 (Fed. Cir. 1994)). A POSITA would understand that “PC-based equipment” includes desktop computers, laptops, smartphones, and VoIP phones. *See* Madiseti Decl. ¶ 45.

Cisco’s red-herring response argues that Paltalk’s “construction would sweep [in] devices such as ‘phones.’” *See* Cisco Br. at 9. This is wrong and, if Cisco were concerned about constructions sweeping in PSTN devices like traditional phones, Cisco could have proposed a

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and VoIP phones are personal computers because they are “microcomputers primarily intended for stand-alone use by an individual” and “do not need to share the processing, disk, and printer resources of another computer.” Ex. 2, *Personal Computer (PC)*, IBM Dictionary of Computing (10th ed. 1993); *Personal Computer*, Microsoft Press Computer Dictionary (3rd ed. 1997).

construction disclaiming such devices—but Cisco chose not to. Regardless, Paltalk’s construction does not include traditional phones, and the Patent language precludes traditional phones from being “PC-based equipment.” ’858 Pat., 1:58–59 (“[P]articipants [connect] to a central MCU using PC-based equipment and the internet, rather than traditional phone equipment over the PSTN.”). Nothing in the intrinsic evidence excludes multifunctional devices like smartphones and VoIP phones serving as personal computers (or personal devices that act as computers). *See* Madisetti Decl. ¶ 45. Both are thus included in the term “PC-based equipment.”

3. **“means for removing before said packet sender sends said multiplexed stream to one of the plurality of clients which have the capability to mix multiple audio streams, from said multiplexed stream said packets of audio data received from said one of the plurality of clients, when said one of the plurality of clients is on said list of active speakers” (cl. 7)**

*and*

**“means for removing, before said packet sender sends said combined packet to one of the plurality of clients which do not have the capability to mix multiple audio streams, from said combined packet said packets of audio data received from said one of the plurality of clients, when said one of the plurality of clients is on said list of active speakers” (cl. 8)**

| Paltalk’s Constructions   | Cisco’s Constructions  |
|---|--|
| <b>Claim 7</b> <ul style="list-style-type: none"> <li>• <b>Function:</b> removing, before said packet sender sends said multiplexed stream to one of the plurality of clients which have the capability to mix multiple audio streams, from said multiplexed stream said packets of audio data received from said one of the plurality of clients, when said one of the plurality of clients is on said list of active speakers</li> <li>• <b>Structure:</b> mixer 118 in Figures 1 and 2 as well as equivalents thereof</li> </ul> | <b>Claim 7</b> <ul style="list-style-type: none"> <li>• <b>Function:</b> removing, before said packet sender sends said multiplexed stream to one of the plurality of clients which have the capability to mix multiple audio streams, from said multiplexed stream said packets of audio data received from said one of the plurality of clients, when said one of the plurality of clients is on said list of active speakers</li> <li>• <b>Structure:</b> Indefinite</li> </ul> |



|  |  |
|--|--|
| <p><b>Claim 8</b></p> <ul style="list-style-type: none"> <li>• <b>Function:</b> removing, before said packet sender sends said combined packet to one of the plurality of clients which do not have the capability to mix multiple audio streams, from said combined packet said packets of audio data received from said one of the plurality of clients, when said one of the plurality of clients is on said list of active speakers</li> <li>• <b>Structure:</b> mixer <b>118</b> in Figures 1 and 2 as well as equivalents thereof</li> </ul> | <p><b>Claim 8</b></p> <ul style="list-style-type: none"> <li>• <b>Function:</b> removing, before said packet sender sends said combined packet to one of the plurality of clients which do not have the capability to mix multiple audio streams, from said combined packet said packets of audio data received from said one of the plurality of clients, when said one of the plurality of clients is on said list of active speakers</li> <li>• <b>Structure:</b> Indefinite</li> </ul> |
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The Patent includes two means-plus-function claims that describe how conferencing software accomplishes echo suppression by removing an active-speaker client's own audio before sending data to that client. Claim 7 describes that process for a mixing client (i.e., a computerized device). '858 Pat., 8:60-67. Claim 8 describes that process for a non-mixing client (i.e., a traditional telephone). *Id.* 9:1-8.

Courts follow a two-step process when construing means-plus-function terms. First, the court "identif[ies] the claimed function." *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1351 (Fed. Cir. 2015). "Then, the court must determine what structure, if any, disclosed in the specification corresponds to the claimed function." *Id.* "Structure disclosed in the specification qualifies as 'corresponding structure' if the intrinsic evidence clearly links or associates that structure to the function recited in the claim." *Id.* at 1352. Courts presume that patents are valid, and "[a]ny fact critical to a holding on indefiniteness ... must be proven by the challenger by clear and convincing evidence." *One-E-Way, Inc. v. Int'l Trade Comm'n*, 859 F.3d 1059, 1062 (Fed. Cir. 2017) (alteration in original) (quoting *Cox Commc'ns, Inc. v. Sprint Commc'n Co. LP*, 838 F.3d 1224, 1228 (Fed. Cir. 2016)).

The parties agree on the functions for both disputed terms, but Cisco argues that the Patent does not disclose structures for the terms. Cisco is wrong. Paltalk's construction identifies the "mixer 118," which is described and depicted in the specification as the structure for claims 7 and 8. Paltalk's construction is amply supported by intrinsic and extrinsic evidence.

Contrary to Cisco's principal argument, the Patent explicitly discloses a structure of "mixer 118 in Figures 1 and 2 as well as equivalents thereof" for both terms. In one embodiment, the "means for removing" is accomplished as follows. The "buffer 202," located inside the "mixer 118," receives audio packets from clients through the "switch 114." '858 Pat., 4:37. Then, the "mixer/multiplexor 208" forms multiplexed audio packets to send to clients with mixing capabilities. *Id.* Thereafter, the "packet sender 210" forwards the packets to the clients, but not before the mixer has the chance to "detect" an "event." *Id.* 4:64-65 ("In step 302, an event is detected by the mixer 118 causing switch 204 to close.").

When the "mixer 118" detects an event, it triggers a response from "control flow 300." *Id.* 5:3-7. This "control flow 300" element, which is intertwined with the "mixer 118," clearly discloses the control logic (i.e., "special programming") Cisco mistakenly asserts to be absent. The "control flow" uses the "packet mixer/multiplexor 208" to multiplex audio data for each active speaker. *Id.* 5:44-46. Where a "party j" is an active speaker, step 314 "will not include party j's own audio data in the multiplexed packets." *Id.* 5:49-50. "This is, in essence, an echo suppression function so that party j will not 'hear themselves speak.'" *Id.* 5:50-52. The "mixer 118" is the disclosed structure that performs the functions of claims 7 and 8.

Dr. Madisetti's declaration supports this conclusion. Looking to Figures 1-3, Dr. Madisetti recognizes that the "mixer 118" of the MCU server, "mixer 118's" component parts (including the "buffer 202" that receives audio packets and the "mix/mux 208" that multiplexes the data), and

the control flow process after event detection would disclose to a POSITA the structure of claims 7 and 8. Madisetti Decl. ¶ 47-51.

Cisco next argues that the disputed means-plus-function terms are indefinite because the Patent does not disclose an algorithm. That is wrong for two reasons. First, the claims at issue do not require a disclosed algorithm. A patent must disclose an algorithm only in certain circumstances. “[I]n a means-plus-function claim ‘in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.’” *Aristocrat Techs. Australia Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008) (quoting *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999)). Cisco argues that the Patent discloses only a general purpose computer as its proposed structure. That is incorrect. The “mixer 118” is the disclosed structure, and it is *not* a general purpose computer. It is a special-purpose element of the multipoint control unit (MCU) server described in the Patent. ’858 Pat., 4:5-10; 4:63-5:5; Madisetti Decl. ¶ 55.

Second, the Patent validly discloses an algorithm for performing the “means for removing” functions in the form of flow charts and prose. *See Williamson*, 792 F.3d at 1352 (“The algorithm may be expressed as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure.”). The specification describes the “mix/mux 208’s” ability to multiplex audio without sending an active speaker client its own audio. The “mix/mux 208” step results in streams and packets depending on the number and identity of the active speakers. Madisetti Decl. ¶ 57. When comparing multiplexed streams or combined packets to each other, each unique stream sent to a client has *removed* audio if the client is an active speaker. Thus, Cisco’s assertion that the specification “contains no algorithm associated with the function for

removing packets of audio data from the multiplexed stream” (*see* Cisco Br. at 12) overlooks the “control flow 300” and its interrelated elements (e.g., “mixer 118”) described in Figures 1-3. The specification discloses that, as a step in the control flow (i.e., algorithm) and by way of employing “mix/mux 208,” “if party j is an active speaker, step 314 will not include party j’s own audio data in the multiplexed packets.” ’858 Pat., 5:44-50. The disclosed algorithm sufficiently identifies a multi-step process by which a POSITA could implement the function of “means for removing” data from multiplexed streams or combined packets. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1340 (Fed. Cir. 2016) (“The district court found that the four-step algorithm sufficiently identified a structure for a person of skill in the art to implement the function.”).

Finally, Cisco argues that the disclosed structure does not “relate” to the “means for removing” functions in claims 7 and 8. Cisco Br. at 13-14. This argument misses the point. So long as a POSITA can “recognize the structure in the specification and associate it with the corresponding function in the claim,” the clause is not indefinite. *Williamson*, 792 F.3d at 1352. Dr. Madisetti, as a POSITA, reviewed the specification and determined that the “mixer 118” sufficiently relates to the “means for removing” functions. Madisetti Decl. ¶¶ 46, 56-57. His analysis is correct. For example, Figure 2 shows that the “receive buffer 202,” before the “mix/mux 208” element, **would contain** party j’s own audio data, and “mixer 118” would **remove it** during construction of the multiplexed stream. ’858 Pat., at Fig. 2; *see id.* 4:36-41 (“Mixer 118 includes buffers 202 which receive audio packets from the clients 102 and 108 via switch 114.”). A POSITA would understand that the mixer’s ability to exclude some audio data before data transmission to a client relates to the removal of certain packets from a multiplexed stream (claim 7) or from a combined packet (claim 8). Madisetti Decl. ¶ 56-57. The Patent sufficiently discloses an algorithm, and Cisco cannot demonstrate that claims 7 and 8 are indefinite.

## CONCLUSION

The Court should adopt Paltalk's reasonable and supported constructions and reject Cisco's proposed constructions, which improperly import limitations that are found nowhere in the Patent.

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Respectfully submitted,

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**CERTIFICATE OF SERVICE**

This is to certify that a true and correct copy of the foregoing document was filed electronically using the Court's CM/ECF system, on the 4th day of January, 2022.

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